

## LIE-332-#

Special single channel pyroelectric detector

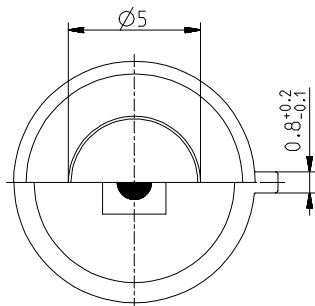
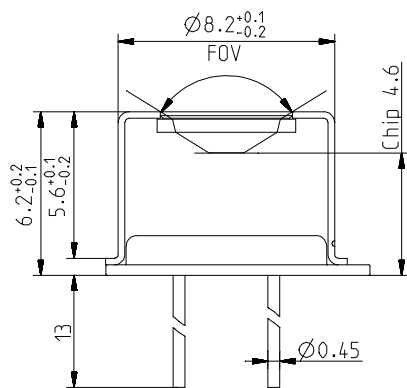
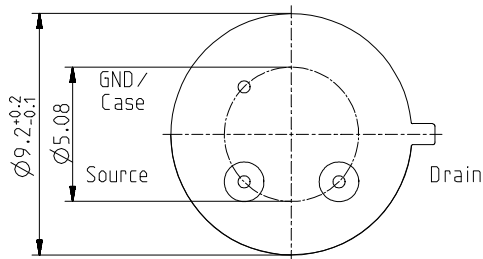
### Description:

single channel; TO39 housing; small chip size;  
 JFET; voltage mode;  
 long time constant, metal black coating



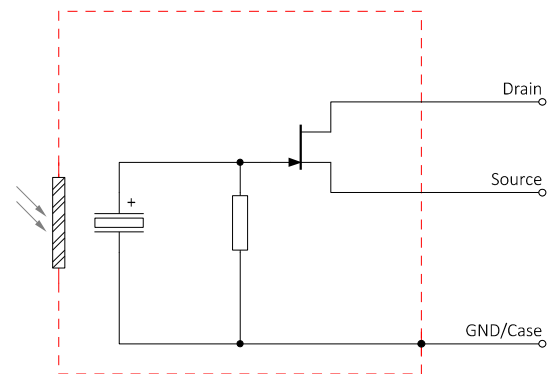
### Housing:

TO39 2+1Pin  
 Bottom view

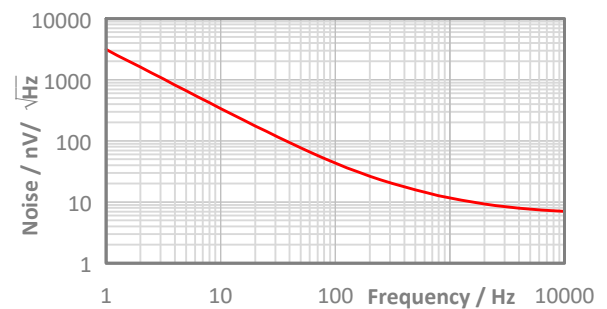
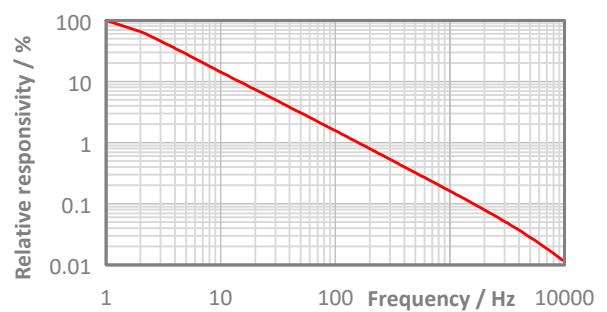


Top view

### Pin Assignment:



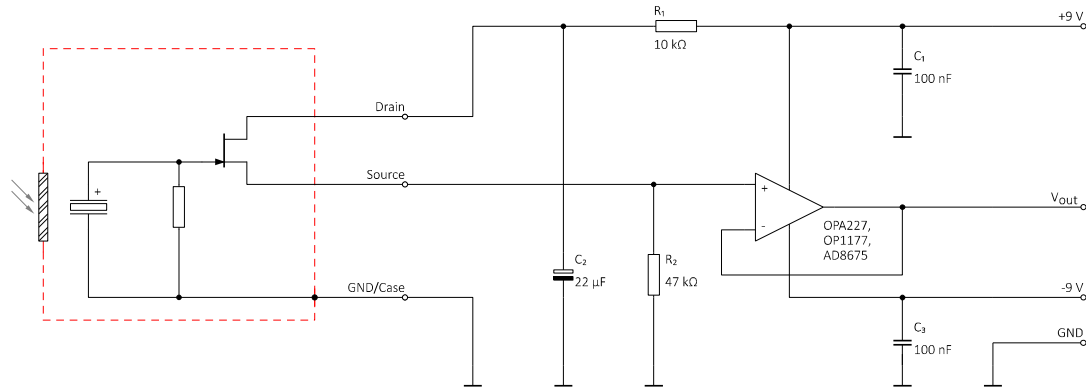
### Frequency Response:



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### Test Circuit:



### Parameters:

Aperture size	nom	∅ 5.0 mm
Element size / type	nom	∅1.3 mm lithium-tantalate with metal black layer
Thermal time constant	typ	200 ms
Electrical time constant	typ	2 s
Polarity	nom	Positive signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	1,200 V/W
Voltage responsivity (rms) {500 K, 100 Hz, 25 °C, without filter/window}	min	120 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	400 nV/√Hz
Noise density (rms) {100 Hz, BW 1 Hz, 25 °C}	max	60 nV/√Hz
Detectivity {500 K, 10 Hz, BW 1 Hz, 25 °C, without filter/window}	typ	4.5E+08 cmVHz/W
Detectivity {500 K, 100 Hz, BW 1 Hz, 25 °C, without filter/window}	typ	2.8E+08 cmVHz/W
Detectivity {500 K, 1 kHz, BW 1 Hz, 25 °C, without filter/window}	typ	1.4E+08 cmVHz/W
Offset voltage {opt. Drain current = 10 ... 100 μA}	nom	0.4 ... 1.5 V
Drain source voltage	max	18 V
Operating / Storage temperature	nom	-25 ... +60 °C
IR filter		All InfraTec standard crystal windows (BaF2, CaF2, Csl, KBr, Sapphire) are available. Customized filters upon request.
Filter sizes	nom	Rectangular filters: (5.25 × 5.25) mm +0/-0.05 mm Circular filters: ∅6.5 mm ±0.1 mm Standard thickness: 0.50 mm +0.2/-0.1 mm Maximum thickness: 0.85 mm
Field of View	min	CaF2 or BaF2; 0.4 mm thick: 105°

InfraTec reserves the right to change these specifications at any time without notification.